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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/784,002	02/20/2004	John W. Bulluck	TRIA:014	4378

7590 05/12/2005

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EXAMINER
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MCCLENDON, SANZA L

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 05/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/784,002

Applicant(s)

BULLUCK ET AL.

Examiner

Sanza L. McClendon

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) 1-34 and 45 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 35-44 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 10/2004.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-10, drawn to a UV-light curable composition, classified in class 522, subclass 81.
  - II. Claims 11-18 and 45, drawn to A UV-light curable formulation, classified in class 522, subclass 104.
  - III. Claims 19-34, drawn to a method of curing, classified in class 427, subclass 508.
  - IV. Claims 35-44, drawn to a method of repairing, classified in class 427, subclass 140.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions, they are different formulations not disclosed as capable of being used together. The formulation of Group I has a fiberglass filler and the formulation of Group II does not.
3. Inventions I and III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are not disclosed as useable together and are different formulations. The formulation of III is being applied to a fiberglass substrate and the formulation of I has a fiberglass filler.
4. Inventions I and IV are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are not disclosed as capable of being used together. The light formulation of I is not necessary in the method of repair, therefore they have different effects.
5. Inventions II and III are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are not disclosed are usable together and have different formulations. The formulation of II is not the same as the formulation in the method of III.

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6. Inventions II and IV are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are not disclosed as usable together and the formulation of II is not required in the method of repair formulation.

7. Inventions III and IV are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are not disclosed as usable together and the methods have different modes of operation and effects. The formulation of III is not required in the method of IV, nor is there is a step of creating a vacuum before irradiation.

8. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

9. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II-IV, restriction for examination purposes as indicated is proper.

10. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

11. During a telephone conversation with Mr. O'Keefe on May 5, 2005 a provisional election was made without traverse to prosecute the invention of IV, claims 35-44. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-34 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

12. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Claim Rejections - 35 USC § 103***

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 35-44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al (5,166,007) in view of Ellrich et al (.4,737,593).

Smith et al teaches repair compositions for vehicles. Said repair compositions comprise a UV-light curable composition. Said composition comprises (a) one or more ethylenically unsaturated copolymerizable polyester, vinyl or acrylic esters, (b) one or more ethylenically unsaturated copolymerizable monomeric compounds, (c) an inhibitor, and (d) a UV sensitizer, with or without optional additives—see column 4, lines 17-35. Said UV sensitizer consists of one or more acylphosphine oxide compounds having the formula found in column 4. Preferably said acylphosphine oxide is 2,4,6-trimethylbenzoyl diphenylphosphine oxide—see column 5, lines 35-37. Component (a) is preferably an acrylated bisphenol A diepoxide or an acrylated novolak triepoxide—see column 7, lines 62-65. Said monomeric compounds (b) include a mixture of monomeric compounds, such as styrene and other monomers. Said other monomer can be found in column 6, lines 60 to the end. Additionally it is disclosed the acrylic or methacrylic monomers having hydroxyl groups can be added since they increase cure rate—see column 7, lines 23-30. Preferred are combinations of vinyl toluene and hydroxyalkyl acrylate monomers—see column 7, lines 57-60.

While Smith et al does not expressly teach using the acylphosphine oxide with a hydroxyl ketone photoinitiator, it is well-known in the art to combine such types of photoinitiators for a thorough cure—see Ellrich et al column 4, lines 45-50. Therefore the examiner deems that it would have been obvious for a artisan of ordinary skill in the art at the time of the invention to combine the acylphosphine oxide with a hydroxyl ketone, as found in the teachings of Ellrich et al column 4, lines 45-50. The motivation would have been a reasonable expectation of obtaining an adequately cured laminate in the repairing of vehicles as taught by smith et al in the absence of evidence to the contrary and/or unexpected results. Additionally, Smith et al does not

Said repair methods using said formulations includes a photocurable prepreg fabric, a UV transparent release film, and a UV blocking film, wherein the above described formulation is used to impregnate the prepreg fabric. Said prepreg fabric can be a woven fiberglass fabric. In addition, the above method can include a layer of photocurable molding applied to an area for repair. Said photocurable molding layer includes the above

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described photocurable composition containing a thickener and/or a reinforcing agents. Figure 3 and column 8, lines 40-63, shows a metal surface having a hole (repairable area) that is first plugged with the photocurable molding rein to smooth said repair area, applying a patch (fiberglass mat impregnates with a photocurable resin composition), and then curing said laminate with UV light to obtained the repaired vehicle component. This appears to anticipate the method of claim 35. While the examiner is aware that Smith et al does not disclose creating a vacuum across at least on side of the coated UV curable light formulation, the examiner deems that it would have been obvious for a skill artisan at the time of the invention to create a vacuum before irradiation of the UV curable formulation. The motivation would have been a reasonable expectation of curing in an oxygen free environment since it is well known that oxygen inhibits free radicals created by the exposure of radiation in a UV curable system in the absence of evidence to the contrary and/or unexpected results.

### *Conclusion*

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sanza L. McClendon whose telephone number is (571) 272-1074. The examiner can normally be reached on Monday through Friday 7:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sanza L. McClendon

Examiner

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